

**-- REMARKS --**

The present amendment replies to an Office Action dated May 14, 2008. Claims 1-19 are pending in the present application. In the Office Action, the Examiner rejected claims 1-19 on various grounds. The Applicants respond to each ground of rejection as subsequently recited herein and requests reconsideration of the present application.

35 U.S.C. §102 Rejections

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the . . . claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Thus, to warrant the §102 rejection, the references cited by the Examiner must show each and every limitation of the claims in complete detail. The Applicants respectfully assert that the cited references fail to do so.

A. Claims 1, 3, 11, 14, and 16 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Publication No. 2002/0171363 A1 to Scott, *et al.* (the *Scott* publication).

The Applicants respectfully assert that the *Scott* publication fails to disclose each and every element of the Applicants' invention as claimed, as required to maintain a rejection under 35 U.S.C. §102(b). The *Scott* publication fails to disclose, teach, or suggest:

A process of manufacturing a high-intensity discharge lamp including placing the discharge vessel in contact with a suspension of inorganic particles and allowing the suspension to enter pores in said wall, thus completely coating the surface of said wall, as recited in independent claim 1; or

A process of manufacturing including providing an elongate ceramic discharge vessel having a wall including pores, and filling the pores with the suspension to form a coating, as recited in independent claim 16.

At most, the *Scott* publication discloses a two-step process for forming a high-transmittance arc tube from a sintered arc tube. The first step includes a densifying and/or porosity reducing step process, such as hot isostatic pressing of the arc tube. The second step includes chemically polishing the surface of the tube. *See* paragraph [0026]. The polishing process removes high spots on the individual alumina grains without introducing significant low spots at the grain boundaries. *See* paragraph [0037]. It is preferable in carrying out this type of chemical polishing treatment that the flux composition also be selected so as to dissolve the surface layer of the alumina grains preferentially, rather than dissolve any material at the grain boundaries. This provides a surface flattening action. *See* paragraph [0031].

In addition, the arc tube to which the second step is applied does not have surface pores. The partially sintered  $\text{Al}_2\text{O}_3$  arc tube has few, if any, "open" pores. *See* paragraph [0025]. The pressure in the hot isostatic pressing of the first step eliminates substantially all microscopic porosity which otherwise would reduce the effectiveness of the second, polishing step. *See* paragraph [0028].

Therefore, the *Scott* publication discloses applying a flux material to an arc tube without surface pores to dissolve the surface material and flatten the surface, rather than a process which introduces a suspension including inorganic particles into the pores of the elongate ceramic discharge vessel as claimed.

Claims 3, 11, and 14 depend directly or indirectly from independent claim 1 and so include all the elements and limitations of independent claim 1. The Applicants therefore respectfully submit that dependent claims 3, 11, and 14 are allowable over the *Scott* publication for at least the same reasons as set forth above for independent claim 1.

Withdrawal of the rejection of claims 1, 3, 11, 14, and 16 under 35 U.S.C. §102(b) as being anticipated by the *Scott* publication is respectfully requested.

35 U.S.C. §103 Rejections

Obviousness is a question of law, based on the factual inquiries of 1) determining the scope and content of the prior art; 2) ascertaining the differences between the claimed invention and the prior art; and 3) resolving the level of ordinary skill in the pertinent art. *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). See MPEP 2143.03. The Applicants respectfully assert that the cited references fail to teach or suggest all the claim limitations.

B. Claims 2, 4, 5, 12, 13, 17, and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over the *Scott* publication in view of U.S. Patent No. 5,336,969 to Weiss, *et al.* (the *Weiss* patent).

The Applicants respectfully assert that the *Scott* publication and the *Weiss* patent, alone or in combination, fail to disclose, teach or suggest each and every element of the Applicants' invention as claimed, as required to maintain a rejection under 35 U.S.C. §103(a). As discussed in Section A above, the Applicants assert that the *Scott* publication fails to disclose, teach, or suggest:

A process of manufacturing a high-intensity discharge lamp including placing the discharge vessel in contact with a suspension of inorganic particles and allowing the suspension to enter pores in said wall, thus completely coating the surface of said wall, as recited in independent claim 1; or

A process of manufacturing including providing an elongate ceramic discharge vessel having a wall including pores, and filling the pores with the suspension to form a coating, as recited in independent claim 16.

The *Weiss* patent also fails to disclose these elements.

Claims 2, 4, 5, 12, and 13, and claims 17 and 18 depend directly or indirectly from independent claims 1 and 16, respectively, and so include all the elements and limitations of their

respective independent claims. The Applicants therefore respectfully submit that dependent claims 2, 4, 5, 12, 13, 17, and 18 are allowable over the *Scott* publication in view of the *Weiss* patent for at least the same reasons as set forth above for their respective independent claims.

Regarding claim 4, the *Weiss* patent fails to disclose sintering the coated discharge vessel as claimed, but instead discloses firing the coating with a flame. See column 3, lines 59-63.

Withdrawal of the rejection of claims 2, 4, 5, 12, 13, 17, and 18 under 35 U.S.C. §103(a) as being unpatentable over the *Scott* publication in view of the *Weiss* patent is respectfully requested.

C. Claims 6, 7, 15, and 8-10 were rejected under 35 U.S.C. §103(a) as being unpatentable over the *Scott* publication.

The Applicants respectfully assert that the *Scott* publication fails to disclose, teach or suggest each and every element of the Applicants' invention as claimed, as required to maintain a rejection under 35 U.S.C. §103(a). The *Scott* publication fails to disclose, teach, or suggest:

A high-intensity discharge lamp characterized in that a coating of inorganic particles completely covers and is made an integral fused part of the ceramic wall of the discharge vessel, which integral fused part has a pore-filling effect such that the porosity of the finished ceramic wall of the discharge vessel is smaller than 0.01 %, as recited in independent claim 6.

At most, the *Scott* publication discloses a two-step process for forming a high-transmittance arc tube from a sintered arc tube. The first step includes a densifying and/or porosity reducing step process, such as hot isostatic pressing of the arc tube. The second step includes chemically polishing the surface of the tube. See paragraph [0026]. The polishing process removes high spots on the individual alumina grains without introducing significant low spots at the grain boundaries. See paragraph [0037]. It is preferable in carrying out this type of chemical polishing treatment that the flux composition also be selected so as to dissolve the surface layer of the alumina grains preferentially, rather than dissolve any material at the grain

boundaries. This provides a surface flattening action. *See* paragraph [0031]. The *Scott* publication fails to disclose any numerical values for porosity, and so fails to disclose the value of porosity as recited in independent claim 6.

In addition, the arc tube to which the second step is applied does not have surface pores. The partially sintered  $\text{Al}_2\text{O}_3$  arc tube has few, if any, "open" pores. *See* paragraph [0025]. The pressure in the hot isostatic pressing of the first step eliminates substantially all microscopic porosity which otherwise would reduce the effectiveness of the second, polishing step. *See* paragraph [0028].

Therefore, the *Scott* publication discloses applying a flux material to an arc tube without surface pores to dissolve the surface material and flatten the surface, rather than having an integral fused part that has a pore-filling effect such that the porosity of the finished ceramic wall of the discharge vessel is smaller than 0.01 %. The *Scott* publication starts with an arc tube without surface pores and dissolves surface material to flatten the surface, thus teaching away from the Applicants' invention as claimed.

Claims 7, 15, and 8-10 depend directly or indirectly from independent claim 6 and so include all the elements and limitations of independent claim 6. The Applicants therefore respectfully submit that dependent claim 7 is allowable over the *Scott* publication for at least the same reasons as set forth above for independent claim 6.

Regarding claim 7, the *Scott* publication fails to disclose any numerical values for total transmission, total forward transmission, or real in-line transmission, and so fails to disclose the values of transmission, total forward transmission, and real in-line transmission as recited in dependent claim 7.

Withdrawal of the rejection of claims 6, 7, 15, and 8-10 under 35 U.S.C. §103(a) as being unpatentable over the *Scott* publication in view of the *Scott* publication is respectfully requested.

D. Claim 19 was rejected under 35 U.S.C. §103(a) as being unpatentable over the *Scott* publication in view of U.S. Patent No. 6,498,433 to Scott, *et al.* (the *Scott* patent).

The Applicants respectfully assert that the *Scott* publication and the *Scott* patent, alone or in combination, fail to disclose, teach or suggest each and every element of the Applicants' invention as claimed, as required to maintain a rejection under 35 U.S.C. §103(a). As discussed in Section A above, the Applicants assert that the *Scott* publication fails to disclose, teach, or suggest:

A process of manufacturing including providing an elongate ceramic discharge vessel having a wall including pores, and filling the pores with the suspension to form a coating, as recited in independent claim 16.

The *Scott* patent also fails to disclose these elements.

Claim 19 depends directly from independent claim 16 and so includes all the elements and limitations of independent claim 16. The Applicants therefore respectfully submit that dependent claim 19 is allowable over the *Scott* publication in view of the *Scott* patent for at least the same reasons as set forth above for their respective independent claims.

Withdrawal of the rejection of claim 19 under 35 U.S.C. §103(a) as being unpatentable over the *Scott* publication in view of the *Scott* patent is respectfully requested.

**SUMMARY**

Reconsideration of the rejection of claims 1-19 is requested. The Applicants respectfully submit that claims 1-19 fully satisfy the requirements of 35 U.S.C. §§102, 103, and 112. In view of the foregoing, favorable consideration and early passage to issue of the present application is respectfully requested.

Dated: **July 9, 2008**

Respectfully submitted,  
M. P. B. VAN BRUGGEN, *et al.*

PHILIPS INTELLECTUAL PROPERTY  
& STANDARDS  
P.O. Box 3001  
Briarcliff Manor, New York 10510

---

Christopher M. Ries  
Registration No. 45,799  
Attorney for Applicant

CARDINAL LAW GROUP  
Suite 2000  
1603 Orrington Avenue  
Evanston, Illinois 60201  
Phone: (847) 905-7111  
Fax: (847) 905-7113

---

/FRANK C. NICHOLAS/  
Frank C. Nicholas  
Registration No. 33,983  
Attorney for Applicant